

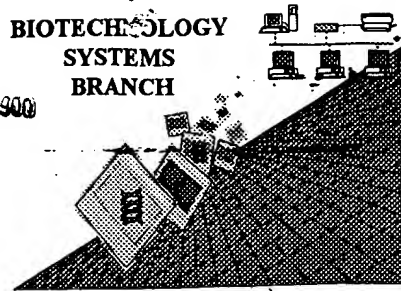
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AUG 21 2000

BIOTECHNOLOGY
SYSTEMS
BRANCH

TECH CENTER 1600/2900

RAW SEQUENCE LISTING
ERROR REPORT



P#16

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/196,161B

Source: 1645

Date Processed by STIC: 8/15/2000

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR FURTHER INFORMATION, PLEASE TELEPHONE MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October-1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:
<http://www.uspto.gov/web/offices/pac/checker>

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1645

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/196,161B
DATE: 08/15/2000
TIME: 15:57:12

Input Set : A:\1459-011.app
Output Set: N:\CRF3\08152000\I196161B.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: SIN, Yoke Min
4 LAM, Toong Jin
5 GONG, Zhiyuan
7 <120> TITLE OF INVENTION: A RECOMBINANT VACCINE AGAINST FISH INFECTIOUS DISEASES
9 <130> FILE REFERENCE: Applied Research
11 <140> CURRENT APPLICATION NUMBER: 09/196,161B
12 <141> CURRENT FILING DATE: 1998-11-20
14 <150> PRIOR APPLICATION NUMBER: 9803188-3
15 <151> PRIOR FILING DATE: 1998-09-28
17 <160> NUMBER OF SEQ ID NOS: 11
19 <170> SOFTWARE: PatentIn Ver. 2.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 105
23 <212> TYPE: PRT
24 <213> ORGANISM: Artificial Sequence
26 <220> FEATURE:
27 <221> NAME/KEY: MUTAGEN
28 <222> LOCATION: (2)
29 <223> OTHER INFORMATION: A/S WHERE S HAS BEEN DERIVED FROM THE SYNTHETIC
30 GENE.
32 <220> FEATURE:
33 <221> NAME/KEY: MUTAGEN
34 <222> LOCATION: (4)..(105)
35 <223> OTHER INFORMATION: Q - THE GLUTAMINE CONDONS TAA AND TAG IN THE
36 ORIGINAL SEQUENCE, HAVE BEEN REPLACED WITH THE
37 UNIVERSAL GLUTAMINE CONDONS CAG AND CAA IN THE
38 SYNTHETIC GENE
40 <220> FEATURE:
41 <221> NAME/KEY: MUTAGEN
42 <222> LOCATION: (34)
43 <223> OTHER INFORMATION: V/G WHERE G HAS BEEN DERIVED FROM THE SYNTHETIC
44 GENE
46 <220> FEATURE:
47 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
48 oligonucleotides
50 <400> SEQUENCE: 1
51 Gly Ala Ala Gln Gly Glu Ala Asn Gly Asn Gln Pro Phe Ala Ala Asn
52 1 5 10 15
54 Asn Ala Ala Arg Gly Ile Cys Val Pro Cys Gln Ile Asn Arg Val Gly
55 20 25 30
57 Ser Val Thr Asn Ala Gly Asp Leu Ala Thr Leu Ala Thr Gln Cys Ser
58 35 40 45
60 Thr Gln Cys Pro Thr Gly Thr Ala Leu Asp Asp Gly Val Thr Asp Val
61 50 55 60
63 Phe Asp Arg Ser Ala Ala Gln Cys Val Lys Cys Lys Pro Asn Phe Tyr
64 65 70 75 80
66 Tyr Asn Gly Gly Ser Pro Gln Gly Glu Ala Pro Gly Val Gln Val Phe

CODONS
OK OK

CODONS

*This is an
amino acid
sequence.*

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67                               85                               90                               95
69 Ala Ala Gly Ala Ala Ala Gly Val
70                               100                               105
73 <210> SEQ ID NO: 2
74 <211> LENGTH: 317
75 <212> TYPE: DNA
76 <213> ORGANISM: Ichthyophthirius multifiliis
78 <220> FEATURE:
79 <221> NAME/KEY: CDS
80 <222> LOCATION: (1)..(30)
82 <400> SEQUENCE: 2
83 ggt gct gct taa gga gaa gct aat ggt aat taacctttcg cagcaaataa 50
84 Gly Ala Ala Gln Gly Glu Ala Asn Gly Asn
85 1 5 10
87 tgctgctaga ggtatatgtg taccatgcc aataaacaga gtaggctctg ttaccaatgc 110
89 aggtgactta gctactttag ccacataatg cagtacttaa tgcctactg gcaactgcact 170
91 tgatgatgga gtgacagatg tttttgatag atcagccgca taatgtgtta aatgcaaacc 230
93 taacttttac tataatgggtg gttctcctta aggtgaagct cctggcgctt aagtttttgc 290
95 tcgctgggtgc tgcgctgca ggtgttg 317
98 <210> SEQ ID NO: 3
99 <211> LENGTH: 6
100 <212> TYPE: PRT
101 <213> ORGANISM: Ichthyophthirius multifiliis
103 <400> SEQUENCE: 3
104 Gly Glu Ala Asn Gly Asn
105 1 5
109 <210> SEQ ID NO: 4
110 <211> LENGTH: 316
111 <212> TYPE: DNA
112 <213> ORGANISM: Ichthyophthirius multifiliis
114 <400> SEQUENCE: 4
115 ggatccgctc agggagaagc taatggtaat cagcctttcg cagcaaataa tgctgctaga 60
116 ggtatatgtg taccatgcc aataaacaga gtaggctctg gtaccaatgc aggtgactta 120
117 gctactttag ccacacaatg cagtactcag tgcctactg gcaactgcact tgatgatgga 180
118 gtgacagatg tttttgatag atcagccgca cagtgtgtta aatgcaaacc taacttttac 240
119 tataatgggtg gttctcctca ggtgaagct cctggccttc aggtttttgc tgctggtgct 300
120 gccgctgcag gaattc 316
123 <210> SEQ ID NO: 5
124 <211> LENGTH: 66
125 <212> TYPE: DNA
126 <213> ORGANISM: Artificial Sequence
128 <220> FEATURE:
129 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
130 oligonucleotides
132 <400> SEQUENCE: 5
133 ggcggatccg ctcagggaga agctaattggt aatcagcctt tcgcagcaaa taatgctgct 60
134 agaggt 66
137 <210> SEQ ID NO: 6
138 <211> LENGTH: 60

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 PATENT APPLICATION: US/09/196,161B TIME: 15:57:12

Input Set : A:\1459-011.app
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```

139 <212> TYPE: DNA
140 <213> ORGANISM: Artificial Sequence
142 <220> FEATURE:
143 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
144     oligonucleotides
146 <400> SEQUENCE: 6
147 ttacgacgat ctccatatac acatggtacg gtttatttgt ctcatccgag accatggcca 60
150 <210> SEQ ID NO: 7
151 <211> LENGTH: 66
152 <212> TYPE: DNA
153 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
157     oligonucleotides
159 <400> SEQUENCE: 7
160 accggtacca atgcaggtaga cttagctact ttagccacac aatgcagtac tcagtgtcct 60
161 actggc 66
164 <210> SEQ ID NO: 8
165 <211> LENGTH: 59
166 <212> TYPE: DNA
167 <213> ORGANISM: Artificial Sequence
169 <220> FEATURE:
170 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
171     oligonucleotides
173 <400> SEQUENCE: 8
174 gtcacaggat gaccgtgacg tgaactacta cctcactgtc tacaaaaact atctagtgc 59
177 <210> SEQ ID NO: 9
178 <211> LENGTH: 68
179 <212> TYPE: DNA
180 <213> ORGANISM: Artificial Sequence
182 <220> FEATURE:
183 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
184     oligonucleotides
186 <400> SEQUENCE: 9
187 cctgatcagc cgcacagtgt gttaaatac aacctaactt ttactataat ggtgggtctc 60
188 ctcaagggt 68
191 <210> SEQ ID NO: 10
192 <211> LENGTH: 69
193 <212> TYPE: DNA
194 <213> ORGANISM: Artificial Sequence
196 <220> FEATURE:
197 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
198     oligonucleotides
200 <400> SEQUENCE: 10
201 ccaagaggag tcccacttcg aggaccgcaa gtccaaaaac gacgaccacg acggcgacgt 60
202 ccttaagcg 69
205 <210> SEQ ID NO: 11
206 <211> LENGTH: 17
207 <212> TYPE: DNA

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Input Set : A:\1459-011.app
Output Set: N:\CRF3\08152000\I196161B.raw

208 <213> ORGANISM: e. coli (XL1-Blue strain, Stratagene)
210 <400> SEQUENCE: 11
211 tagcatggcc ttgacag

17

VERIFICATION SUMMARY

DATE: 08/15/2000

PATENT APPLICATION: US/09/196,161B

TIME: 15:57:13

Input Set : A:\1459-011.app

Output Set: N:\CRF3\08152000\I196161B.raw